



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/072,455

02/07/2002

Ikuo Kawamoto

020587

1845

38834

7590

05/18/2005

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,455

Applicant(s)

KAWAMOTO ET AL.

Examiner

Tarifur R. Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-34 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the claims

1. In the remarks filed on 02/24/05, applicant mentioned, "claims 1-30 are pending". However, in the RCE filed on 10/21/04 claims 1-34 were pending and the amendment filed on 02/24/05 does not cancel claims 31-34. Accordingly, currently claims 1-34 are pending.

Claim Objections

2. Claim 22 is objected to because of the following informalities: In claim 22, lines 1-2, "the cholesteric liquid crystal layer" lacks antecedent basis.

Appropriate correction is required.

Double Patenting

3. Applicant is advised that should claim 27 be found allowable, claim 30 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2871

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 8, 11-14, 16, 20, 25, 27 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Okumura, USPAT 6,008,871.

6. Okumura discloses (col. 6, lines 20-23, 56-65; col. 7, lines 61-66) and shows in Fig. 1, a liquid crystal display having a polarizing element comprising a reflective polarizing plate (108) comprising a circularly-polarized light separation plate for separating incident natural light into reflected light and transmitted light both of which are composed of polarized light, and a light diffusion pressure-sensitive adhesive layer (107) (being made of polymer containing uncolored transparent particles) provided to the reflecting-polarizing plate.

Also, the method of manufacturing the polarizing element is inherent to the device.

Accordingly, claims 1, 8, 11-14, 16, 20, 25, 27 and 30 are anticipated.

7. Claims 1-3, 6, 11-15, 20, 25, 27 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Sahouani et al., (Sahouani), USPAT 6,574,044.

8. Sahouani discloses (abstract; col. 10, lines 22-29; col. 10, line 67 – col. 11, line 10) and shows in Fig. 3. a polarizing element comprising a reflective polarizing plate (306) comprising a circularly-polarized light separation plate for separating incident natural light into reflected light and transmitted light both of which are composed of

Art Unit: 2871

polarized light, and a light-diffusion pressure-sensitive adhesive layer (304) provided to the reflective-polarizing plate (306).

Sahouani also discloses that the reflective polarizing plate can be a combination of a cholesteric liquid crystal layer (applicant's circularly-polarized light separation plate) and a quarter-wave plate (col. 11, lines 4-10).

Sahouani also discloses that the polarizing element is used in a liquid crystal display.

Also, the method of manufacturing the polarizing element is inherent to the device.

Accordingly, claims 1-3, 6, 11-15, 20, 25, 27 and 30 are anticipated.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2871

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sahouani.

12. As to claims 31-34, it would have been obvious to one of ordinary skill in the art to use plurality of light-diffusion pressure sensitive adhesive layers for several advantages such as to double the desired output. Further, it should also be noted that the specification of the instant application does not recite any criticality of using two or more light-diffusion pressure sensitive adhesive layers.

13. Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura in view of Mikura et al., (Mikura), USPAT 5,880,800.

14. Okumura does not explicitly disclose that the polymer is an acrylic polymer having a weight average molecular weight of at least 100,000.

Mikura discloses optical film having pressure sensitive adhesive layers wherein the pressure-sensitive adhesive layers are made of polymers wherein the polymer is an acrylic polymer having a weight average molecular weight of at least 300,000 (col. 1, line 5; col. 5, line 55 – col. 6, line 2). Mikura also discloses that such an optical film is excellent in heat resistance and moisture resistance (col. 1, lines 6-7).

Mikura is evidence that ordinary workers in the art would find a reason, suggestion or motivation to form pressure-sensitive adhesive layers using acrylic polymer having a weight average molecular weight of at least 300,000.

Therefore, it would have been obvious to one of ordinary skill in the art at the

Art Unit: 2871

time of the invention was made to modify the pressure-sensitive adhesive layer of Okumura by using an acrylic polymer having a weight average molecular weight of at least 300,000 so that an optical film with excellent heat resistance and moisture resistance is obtained, as per the teachings of Mikura.

Accordingly, claims 9 and 17 would have been obvious.

15. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura in view of Goetz et al., (Goetz), USPAT 6,288,172.

16. Okumura discloses that the light-diffusion pressure-sensitive adhesive layer is made of a polymer containing uncolored transparent particles but does not explicitly disclose that the particles have an average particle diameter ranging from 0.5 μm to 20 μm are selected from inorganic particles and organic particles.

Goetz discloses light diffusing adhesive that is made of organic polymer particles having an average diameter of about 0.5 μm to about 30 μm (overlaps the claimed range) (col. 12, lines 11-15). Goetz also discloses that such a light diffusion adhesive provides excellent light diffusion properties with low back scattering (col. 1, lines 12-14).

Goetz is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use light diffusion adhesive that has particles with an average particle diameter ranging from 0.5 μm to 20 μm are selected from inorganic particles and organic particles.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the light diffusion adhesive of Okumura by

Art Unit: 2871

using organic particles having an average particle diameter ranging from 0.5 μ m to 30 μ m so that a light diffusion adhesive with excellent light diffusion properties with low back scattering is obtained, as per the teachings of Goetz.

17. Claims 1-8, 11-16, 19-25 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameyama et al., (Kameyama), USPAT 5,999,243 (provided by the applicant) in view of Trapani et al., (Trapani), US 2003/0002154.

18. Kameyama discloses and shows in Fig. 6, a liquid crystal display including a polarizing element wherein the polarizing element comprising a circularly polarized light separator (1) and quarter wave plate (3) (either only the circularly polarized light separator or the combination of the light-separator and the quarter wave plate being applicant's reflective polarizing plate) for separating incident light into reflected light and transmitted light both of which are composed of polarized light (col. 5, line 59 – col. 6, line 7; col. 12, line 6-56). Kameyama also discloses the use of pressure-sensitive adhesive to laminate multiple layers (col. 13, lines 28-47).

Kameyama differs from the instant invention because he does not explicitly disclose that the pressure-sensitive adhesive layer has diffusive properties.

Trapani discloses polarizers coated with optically functional layers. Trapani also discloses that a diffusion coating such as a diffuse pressure-sensitive adhesive is advantageous since it increases the viewing angle of the liquid crystal display (page 4, paragraph 0052).

Trapani is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use a light-diffusion pressure-sensitive adhesive layer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display of Kameyama by providing a light-diffusion pressure-sensitive adhesive on the reflecting polarizing plate so that the viewing angle of the display is increased, as per the teachings of Trapani.

Further, the method of manufacturing the polarizing element would have been obvious in view of the device.

Accordingly, claims 1, 2, 6, 7, 11-15, 20 and 25 would have been obvious.

As to claims 31-34, since Trapani disclose the advantage of using a light-diffusion pressure sensitive adhesive layer and is not limited to the use of only one light-diffusion pressure sensitive adhesive layer it would have been obvious to one of ordinary skill in the art to use plurality of light-diffusion pressure sensitive adhesive layers for several advantages such as to double the desired output. Further, it should also be noted that the specification of the instant application does not recite any criticality of using two or more light-diffusion pressure sensitive adhesive layers.

As to claims 3, 4, 21 and 22, Kameyama discloses that the circularly polarized light separation plate (1) comprises a cholesteric liquid crystal polymer which has undergone Grandjean orientation (col. 5, lines 59-61).

As to claims 5 and 23, Kameyama also discloses that the cholesteric liquid crystal layer can be a superimposed structure of cholesteric liquid crystal layers different from each other in a helical pitch of Grandjean orientation (col. 7, line 65- col. 8, line 3).

Art Unit: 2871

As to claims 8 and 16, Trapani discloses that the light-diffusion pressure-sensitive adhesive layer is made of a polymer containing glass beads (uncolored transparent material).

As to claims 19 and 24, Kameyama discloses that the polarizer of the invention is not limited to circularly-polarized light separator but also linearly-polarized light separator (col. 5, lines 51-55).

19. Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameyama and Trapani as applied to claims 1-8, 11-16 and 19-25 above and further in view of Mikura et al., (Mikura), USPAT 5,880,800.

20. Kameyama in view of Trapani discloses that the pressure-sensitive adhesive is made of a polymer but do not explicitly disclose the polymer is an acrylic polymer having a weight average molecular weight of at least 100,000.

Mikura discloses optical film having pressure sensitive adhesive layers wherein the pressure-sensitive adhesive layers are made of polymers wherein the polymer is an acrylic polymer having a weight average molecular weight of at least 300,000 (col. 1, line 5; col. 5, line 55 – col. 6, line 2). Mikura also discloses that such an optical film is excellent in heat resistance and moisture resistance (col. 1, lines 6-7).

Mikura is evidence that ordinary workers in the art would find a reason, suggestion or motivation to form pressure-sensitive adhesive layers using acrylic polymer having a weight average molecular weight of at least 300,000.

Therefore, it would have been obvious to one of ordinary skill in the art at the

Art Unit: 2871

time of the invention was made to modify the pressure-sensitive adhesive layer of Kameyama when modified by Trapani such by using an acrylic polymer having a weight average molecular weight of at least 300,000 so that an optical film with excellent heat resistance and moisture resistance is obtained, as per the teachings of Mikura.

Accordingly, claims 9 and 17 would have been obvious.

21. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameyama in view of Trapani as applied to claims 1-8, 11-16 and 19-25 above and further in view of Goetz et al., (Goetz), USPAT 6,288,172.

22. Kameyama in view of Trapani discloses that the light-diffusion pressure-sensitive adhesive layer is made of a polymer containing uncolored transparent particles but does not explicitly disclose that the particles have an average particle diameter ranging from 0.5 μm to 20 μm are selected from inorganic particles and organic particles.

Goetz discloses light diffusing adhesive that is made of organic polymer particles having an average diameter of about 0.5 μm to about 30 μm (overlaps the claimed range) (col. 12, lines 11-15). Goetz also discloses that such a light diffusion adhesive provides excellent light diffusion properties with low back scattering (col. 1, lines 12-14).

Goetz is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use light diffusion adhesive that has particles with an average particle diameter ranging from 0.5 μm to 20 μm are selected from inorganic particles and organic particles.

Art Unit: 2871

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the light diffusion adhesive of Kameyama when modified by Trapani by using organic particles having an average particle diameter ranging from 0.5 μ m to 30 μ m so that a light diffusion adhesive with excellent light diffusion properties with low back scattering is obtained, as per the teachings of Goetz.

Response to Arguments

23. Applicant's arguments filed on 02/24/05 have been fully considered but they are not persuasive.

In response to applicant's argument that applicant's are asserting actual reduction to practice based on evidence provided by the Declaration, including specifically the prior Japanese application, it is respectfully pointed out to applicant that the experiments reported in the Japanese application is sufficient to prove that the invention was *reduced to writing* **not** *reduced to practice*. According to the 1.131(b), as to establish reduction to practice prior to the effective date of the reference, original exhibits of drawings or records, or photocopies thereof, actual model, etc., must accompany and form part of the affidavit or declaration or their absence satisfactorily explained.

Therefore, applicant failed to establish "reduction to practice".

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R. Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC
May 16, 2005


TARIFUR R. CHOWDHURY
PRIMARY EXAMINER